

# ENGINEERING CHANGE NOTICE

DART AEROSPACE LTD

Date: 07.10.22	Job No.:	ADR Yes/No: YES	ADR Date: 07.10.09	ECN #: 1052
Product No.: D412-705-013/-015		Created By: <i>PA</i>	Approved By: <i>MD</i>	
Product Name: INTAKE PLENUM & DRIVESHAFT TUNNEL MOD KITS		Checked By: <i>PA</i>	General Manager Approval:	

Distribution	Reqd	Resp	Received
Production Manager	Y	LL	<i>LL</i>
Production Engineering Coord	Y	EC/DD	<i>EC</i>
Director Quality Assurance	Y	DT/SS	<i>DT 07.11.06</i>
Customer Order Processing	Y	BG	<i>BG 06-11-07</i>

Distribution	Reqd	Resp	Received
Customer Technical Support	Y	Dstow	<i>Dstow 07.11.06</i>
Marketing	Y	SW	<i>SW 07.11.06</i>

## Reason for Change:

PER EDWARDS & ASSOCIATES, D412-705-013/-015 KITS AT CHG 001 /002 ARE NOT COMPATIBLE WITH RECENT BELL 412. SEE ADR.

## Documents Affected:

RELEASE D3245 REV. B, D3256 REV. C AND IIN-D412-705 REV. C

RELEASE ICA-D412-705 REV. 3

#	Engineering Actions	Reqd	Resp	Notes	Complete
1	Required Documents/Drawings Under Review	Y	MB		<i>07.09.24</i>
2	Update Blue/Pink/DSI Folder and Electronic Files	Y	KJ		<i>07.10.24</i>
3	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		<i>07.10.24</i>
4	Update Grey Project Binder	Y	KJ/MB		<i>07.10.24</i>
5	Move Electronic Files	Y	KJ		<i>07.10.24</i>
6	Update Master Document List (MDL)	N			
7	Update Document Record (DR) <i>REV. F</i>	Y	KJ		<i>07.10.24</i>
8	Create/Update Change Record Form	Y	KJ	D412-705-013/-015 NOW @ CHG 002/003	<i>07.10.24</i>
9	Create/Update PPP's	Y	KJ	D412-705-013/-015 NOW @ CHG 002/003	<i>07.10.24</i>
10	Update Controlled PDF Files	Y	KJ		<i>07.10.24</i>
11	Notify TC/FAA of Change	N			
12	Update QSI 021 and/or STC Approval List	N			
13	Update Product Development Summary	N			
14	Update Accpac Database	N			
15	Update Access (ARC) Database	N			
16	Update/Verify ARC	N			
17	Update Paperwork Kits in Production	Y	KJ/LL	<i>who's cancelled 07.11.12</i>	
18	Update Opulse/Laminated Dwgs	N		<i>-013 (2-B34504)-015 (2-B34505)</i>	<i>07.11.06</i>
19	Update Product Compatibility Matrix	N		<i>-017 (2-B33500)-2-B35052</i>	
20	Create Eurocopter Form (FEE)	N		<i>-OR (4-B34231)</i>	
21					

#	Production Actions	Reqd	Resp	Notes	Complete
22	Create/Update Coss IPP/BOM	Y	EC/DD	SEE BELOW.	<i>07.11.06</i>
23	Update FAI Sheets	Y	EC/DD	SEE BELOW.	<i>07.11.06</i>
24	Create/Update CNC Programs	Y	EC/DD	ENSURE WATERJET PROGRAMS ARE UPDATED	<i>07.11.06</i>
25	Create/Update Tooling	N			
26	Red Tag Stock (Specify)	Y	LL		
27	Rework/Scrap Current Production and/or Stock	L	LL	<i>REWORK -013/-015 KITS PER LATEST DWGS</i>	<i>See Attached</i>
28	Update Paperwork Kits in Stock	Y	LL	SEE BELOW.	<i>07.11.12</i>
29	Create/Update MPP	N			
30					

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
31	Notify Previous Customers	N			
32	Notify Eurocopter France	N			
33					

## Description / Action:

ENSURE COSS IPP/BOM AND FAI SHEETS ARE UPDATED FOR D3245 AND D3256 PER REV. B AND C RESPECTIVELY.

ENSURE COSS IPP/BOM ARE UPDATED FOR D412-705-013/-015 KITS.

UPDATE D412-705-013/-015 KITS W/ NEW CHG: D412-705-013 = CHG 002, D412-705-015 = CHG 003, *NEW PAPERWORK & LABELS.*  
*IN STOCK & IN PRODUCTION (-013- 5 IN STOCK, -015- 2 IN STOCK)*

## Marc Bellavance

---

**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** November 2, 2007 7:16 PM  
**To:** 'Marc Bellavance'  
**Cc:** 'Mike Petsche'  
**Subject:** FW: Emailing: 705-3.ica.pdf, 705-2.ica-markups.pdf, 705.icaChecklist.pdf, ICA-D412-705-Rev2.pdf

**Attachments:** MSI 53 Check Sheet.pdf



MSI 53 Check  
Sheet.pdf (55 KB)...

Marc,

See attached. Your updated ICA for D412-705 has been accepted by Transport Canada. Print off the signed MSI 53 check sheet that is attached and put a copy in the binder. Nice job.

David

-----Original Message-----

**From:** Oucharek, Gregory [mailto:OUCHARG@tc.gc.ca]  
**Sent:** Friday, November 02, 2007 3:28 PM  
**To:** David Shepherd (E-mail)  
**Cc:** Stewart, Malcolm  
**Subject:** RE: Emailing: 705-3.ica.pdf, 705-2.ica-markups.pdf, 705.icaChecklist.pdf, ICA-D412-705-Rev2.pdf

David,

Our Maintenance group would prefer that all ICA requests originate from the Aircraft Certification group and not directly from the applicant. This will allow us to make a determination if M&M needs to see the ICA or not. In fact, for simple revisions to a previously accepted ICA I would do a quick scan of the revision and accept without further coordination.

For future review requests, please send to the appropriate project engineer within Aircraft Certification.

Approval is attached.

Thanks,

Greg

-----Original Message-----

**From:** Stewart, Malcolm  
**Sent:** Friday, November 02, 2007 3:02 PM  
**To:** Oucharek, Gregory  
**Subject:** FW: Emailing: 705-3.ica.pdf, 705-2.ica-markups.pdf, 705.icaChecklist.pdf, ICA-D412-705-Rev2.pdf  
**Importance:** High

FYI

Malcolm Stewart  
Civil Aviation Safety Inspector - Inspecteur de la sécurité de l'Aviation civile Tel /

Tél (403) 292-5274 | facsimile / téléc (403) 292-6709 | TTY / ATS  
(613) 990-4500  
E-Mail: stewarm@tc.gc.ca Courrier électronique: stewarm@tc.gc.ca Transport Canada |  
Calgary Transport Canada Centre (RACH), 800, 1601 Airport Road N.E., Calgary, Alberta T2E  
6Z8 Transports Canada | Centres de Transports Canada (RACH), 1601, route Airport N.-E.,  
bureau 800, Calgary, Alberta T2E 6Z8 Government of Canada | Gouvernement du Canada

-----Original Message-----

From: David Shepherd [mailto:dshepherd@dartaero.com]  
Sent: Wednesday, October 31, 2007 3:27 PM  
To: Stewart, Malcolm  
Cc: 'Marc Bellavance'  
Subject: FW: Emailing: 705-3.ica.pdf, 705-2.ica-markups.pdf, 705.icaChecklist.pdf, ICA-D412-705-Rev2.pdf  
Importance: High

Malcolm,

We made some changes to ICA-D412-705 for SH04-25.

The changes affected the D412-705-013/-015 kits that we send to the customer and the procedure for doing the installation, but did not change the end result appreciably. Some changes were required to the ICA for consistency with the amended IIN and other changes were made to improve the ICA or correct typos that were observed as we completed this revision.

Attached you will find the amended ICA (ICA-D412-705 Rev. 3), the MSI 53 ICA checklist, and a marked up version of ICA-D412-705 Rev. 2 so that you can see the changes that were made.

Thanks for your help.

David

No virus found in this outgoing message.  
Checked by AVG Free Edition.  
Version: 7.5.503 / Virus Database: 269.15.15/1101 - Release Date: 10/31/2007  
10:06 AM

No virus found in this incoming message.  
Checked by AVG Free Edition.  
Version: 7.5.503 / Virus Database: 269.15.19/1105 - Release Date: 11/2/2007  
11:04 AM

No virus found in this outgoing message.  
Checked by AVG Free Edition.  
Version: 7.5.503 / Virus Database: 269.15.19/1105 - Release Date: 11/2/2007  
11:04 AM

# ENGINEERING CHANGE NOTICE

DART AEROSPACE LTD

Date: 07.10.22	Job No.:	ADR Yes/No: YES	ADR Date: 07.10.09	ECN #: 1052
Product No.: D412-705-013/-015		Created By: [Signature]	Approved By: [Signature]	
Product Name: INTAKE PLENUM & DRIVESHAFT TUNNEL MOD KITS		Checked By: [Signature]	General Manager Approval:	

Distribution	Reqd	Resp	Received
Production Manager	Y	LL	
Production Engineering Coord	Y	EC/DD	
Director Quality Assurance	Y	DT/SS	
Customer Order Processing	Y	BG	

Distribution	Reqd	Resp	Received
Customer Technical Support	Y	Dstow	
Marketing	Y	SW	

## Reason for Change:

PER EDWARDS & ASSOCIATES, D412-705-013/-015 KITS AT CHG 001 /002 ARE NOT COMPATIBLE WITH RECENT BELL 412. SEE ADR.

## Documents Affected:

RELEASE D3245 REV. B, D3256 REV. C AND IIN-D412-705 REV. C

RELEASE CA-D412-705 REV. 3

#	Engineering Actions	Reqd	Resp	Notes	Complete
1	Required Documents/Drawings Under Review	Y	MB		
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4	Update Grey Project Binder	Y	KJ/MB		07.10.24
5	Move Electronic Files	Y	KJ		07.10.24
6	Update Master Document List (MDL)	N			
7	Update Document Record (DR) REV. F	Y	KJ		07.10.24
8	Create/Update Change Record Form	Y	KJ	D412-705-013/-015 NOW @ CHG 002/003	07.10.24
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10	Update Controlled PDF Files	Y	KJ		07.10.24
11	Notify TC/FAA of Change	N			
12	Update QSI 021 and/or STC Approval List	N			
13	Update Product Development Summary	N			
14	Update Accpac Database	N			
15	Update Access (ARC) Database	N			
16	Update/Verify ARC	N			
17	Update Paperwork Kits in Production	Y	KJ/LL	-013 (2-B34504)-015 (2-B34505)	
18	Update Qpulse/Laminated Dwg's	N			
19	Update Product Compatibility Matrix	N			
20	Create Eurocopter Form (FEE)	N			
21					

REFERENCE ONLY

#	Production Actions	Reqd	Resp	Notes	Complete
22	Create/Update Coss IPP/BOM	Y	EC/DD	SEE BELOW.	
23	Update FAI Sheets	Y	EC/DD	SEE BELOW.	
24	Create/Update CNC Programs	Y	EC/DD	ENSURE WATERJET PROGRAMS ARE UPDATED	
25	Create/Update Tooling	N			
26	Red Tag Stock (Specify)	Y	LL		1/24/12 u 07.11.12
27	Rework/Scrap Current Production and/or Stock	L	LL	REWORK -013/-015 KITS PER LATEST DWGs	
28	Update Paperwork Kits in Stock	Y	LL	SEE BELOW.	W/A - [Signature] u 07.11.12
29	Create/Update MPP	N		MAKE NEW KITS	
30					u/o stock

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
31	Notify Previous Customers	N			
32	Notify Eurocopter France	N			
33					

## Description / Action:

ENSURE COSS IPP/BOM AND FAI SHEETS ARE UPDATED FOR D3245 AND D3256 PER REV. B AND C RESPECTIVELY.

ENSURE COSS IPP/BOM ARE UPDATED FOR D412-705-013/-015 KITS.

UPDATE D412-705-013/-015 KITS W/ NEW CHG: D412-705-013 = CHG 002, D412-705-015 = CHG 003, NEW PAPERWORK & LABELS.  
 ^ IN STOCK & IN PRODUCTION (-013 - @ IN STOCK, -015 - @ IN STOCK)

**AMENDMENT DESIGN REVIEW (ADR)**Part/Installation No.: D412-705-013/-015 Rev: \_\_\_\_\_ Design Review No.: \_\_\_\_\_ Date: 07.10.09Project Number: 00056Project Description/Title: INTAKE PLENUM  
ACCESS PANEL &  
DRIVESHAFT TUNNELEng. Project Manager: MARC BELLAVANCE

Persons Present	Title	Initials
MIKE PETSCH	Design Manager	<i>MP</i>
MARC BELLAVANCE	Engineering Project Manager	<i>MB</i>
DAVID SHEPHERD	Chief Engineer (DE #02)	<i>DS</i>
	Manufacturing Manager	
	Quality Manager	

Comments
EDWARDS & ASSOCIATES REPORTED THAT THE DART D412-705-013/-015 KITS ARE INCOMPATIBLE WITH RECENT BELL 412 MODELS DUE TO A HOLE PATTERN CHANGE ON THE STRUCTURE WHERE THE KITS ARE INSTALLED. THE MANUFACTURING DRAWINGS D3245 REV. A AND D3256 REV. B MUST BE REVISED AS FOLLOWS: 1) REMOVE MOUNTING HOLES USED FOR INSTALLATION FROM FLAT PATTERNS. REMOVE NUTPLATES ON D3245-041/-042. 2) GASKETS ARE NO LONGER INSTALLED BY DART. INSTALLATION INSTRUCTIONS IIN-D412-705 REV. B (D412-705-013/-015 KITS) MUST BE REVISED ACCORDINGLY. INSTALLERS REQUIRE INSTRUCTIONS FOR DRILLING HOLES AND INSTALLATION OF GASKETS. INSTRUCTIONS MUST ENSURE COMPATIBILITY WITH RECENT 412 MODELS AND INCORPORATE DSI 9306 REV. A. CHG NUMBER OF D412-705-013/-015 KITS WILL BE AFFECTED AS FOLLOWS: 1) D412-705-013 WILL MOVE UP FROM CHG 001 TO 002. 2) D412-705-015 WILL MOVE UP FROM CHG 002 TO 003.  APPROVAL BY DE#02 IS ACCEPTABLE BECAUSE THE STRUCTURAL INTEGRITY OF THE D412-705-013/-015 INSTALLATIONS IS NOT AFFECTED.

Key Tasks (Check or N/A)	Check	Responsible	Completion Date
Review Outstanding TSR/NCR/CAR/PAR	N/A		
Fill out Criteria/Constraints Form – Inputs	N/A		
Fill out Project Evaluation Form	N/A		
D-Part creation/revision	X	MB	07.10.02 <i>MB</i>
Get Manufacturing Input	X	MB	07.10.02 <i>MB</i>
First Article Inspection	N/A		
Fit and Function Test	N/A		
Structural Test	N/A		
Reports (Compliance, Loads, Stress, Conformity, DSI) <i>REVISE IWS + ICA</i>	X	MB	07.10.22 <i>MB</i>
Check Drawings against all QSIs	X	MB	07.10.02 <i>MB</i>
Review Criteria/Constraints Form	N/A		
Revision to existing approval	N/A		
Close Amendment Project	X	MB	07.10.

**Conclusion:**

PROCEED WITH REVISION OF D3245 AND D3256 DRAWINGS AND IIN-D412-705. RELEASE DOCUMENTS THROUGH ECN#1052.

*SLC2P D3245 041 / 0417*  
*D3256 041*